

GENEVIEVE KNIGHT

(interviewed by Kenneth A. Ross)

This interview took place on January 7, 2007, in New Orleans and is also based on email correspondence on December 29, 2006.

When did you get interested in mathematics? Did you ever consider fields other than mathematics as a vocation?

I was always interested in all subjects! Mathematics did not stand out early in my life. Teachers often cited that I was as talented in literature as I was in chemistry, physics or mathematics. At first in college, I majored in Home Economics, in preparation to become a Commercial Dietitian! But Sputnik went up, and I was advised to go into science and mathematics. I was recruited to consider a science-related major based on my background and scholarly record. I selected mathematics because I didn't like the smelly labs in science. Also, I suffer from claustrophobia. I believed President Kennedy who challenged young people to enter the arena to put a man on the moon. I enjoyed learning and was actively involved in all content areas.

I suffered a culture shock in college when I was asked to assist other students with their mathematics. Often they did not have a clue about my explanations, and I didn't have any idea what their questions were – there was a total lack of communication. Somehow I believe I was becoming interested in enhancing students' learning of mathematics.

Where did you grow up and go to school?

I grew up in Brunswick, Georgia, located on the old route 17 between Savannah, Georgia, and Jacksonville, Florida. I attended the following schools: Risley Elementary Grades 1-5. Perry Elementary Grade 6, where I graduated first honor student. I was in the first graduating class from Perry, the new elementary school. Risley Junior High Grades 7 -8. Risley Senior High which had moved to its new site in the fall of 1955. I graduated with first honors on May 31, 1957. [We will celebrate our 50th class reunion in July 2007.]

Risley Senior High School was one of the first two high schools in Georgia for colored children that was accredited. Among the faculty were many talented educated teachers and it was an honor to have graduated from this historical school. The impact of early schooling on later success can be traced in the lives of many African Americans who grow up in the south.

What did your parents do? Did they influence your interest in mathematics? If yes, how?

My mother, a stay-at-home parent, was a successful seamstress as were her mother and several other members of her family. She had sayings that I still

remember such as, “Work before pleasure!” and “Save at least a penny of every dime you earn!” She taught my sisters and me many practical and academic things, even though she didn’t finish high school. My mother was very supportive of the schools – attending PTA meetings, serving as homeroom mother, and encouraging more and better funding for the colored students.

Early in life I had several physical problems. In particular, I couldn’t articulate well, but my mother assured others that I was cognitively fine. Only my mother could translate what I said and we shared a speech community of two! When my tonsils were removed at age 5, many of my physical and articulation problems were eliminated.

I took lab-based physics, chemistry and biology courses in high school. When no one was able to help me with my physics problems, Bill Little sat on our front porch and helped me. Bill was the son of one of my mother’s customers who was the wife of the highest ranking county judge. Mrs. Little often assisted my family in securing educational resource materials and a private telephone line to the colored section of town.

My father, a radar and bombing specialist civil service employee, first with the Air Force at the Warner Robins Air Force Base and later at the Glynco Naval Base, Brunswick was a man before his time. He developed a sensory device for lighting the landing strip at the Glynco Naval Base and was able to solve many electronic technical problems over the phone. He was also a good artist and could explain his thoughts and solutions with detailed drawings. At one time, he wanted to seek a better position and was given an exam that had nothing to do with the position he was seeking. He scored highest on the test and was denied the corresponding position. Since it was a civil service test, he had earned the position. This was the Deep South before 1965 and he opted to accept the salary but remained in his old position. This was the old south and he had a wife, children, and no laws to protect him and his family.

In my family, everyone read and discussed issues of the day. This has continued to the present. When the family members gather we sit around the table and exchange ideas. Almost daily we exchange e-mail messages and all have or had science/technology/engineering/math related leadership positions. My father was very political locally. He was involved in getting our area paved streets, curbing, lighting, proper drainage and the list goes on! Our family was not afraid of speaking up. Younger members were encouraged to be smart and that it was all right to be different.

Where did you go to college?

I went to Fort Valley State College, a black college in Fort Valley near Macon, Georgia. As a freshman in 1957, I earned all A’s. I always loved school! When the botany teacher discovered that a beginning freshman student was asking questions about trees

and plants that the grounds people couldn't answer, she invited me to her class. I became her unpaid assistant and was enrolled in her class. Earned an A and had the best lab log in the class of senior majors. This was Professor Marion Myles, who later became the first black woman to teach at the University of Mississippi.

During the early sixties I participated in the "movement," and I was very active in civil rights. Martin Luther King gets all the credit but there were many contributors to the logistics of the movement. Many mathematicians raised their voices and provided their academic talents. Robert Moses and William A. Hawkins were among the ones MAA people know.

Pete Rawlins was one of the talented students at the University of Maryland at College Park (UMCP); he later became the highest ranking member and chair of the budget and appropriation committee in the state of Maryland.

For graduate work, I went to Atlanta University. I studied with Lonnie Cross who has since changed his name to Abdulalim Shabazz. He was an important mentor to me. I finished my Master's in 1962, but didn't get the actual piece of paper until 1963.

In the summer of 1963, I took an NSF summer workshop at the University of Georgia. I was the only black in the mathematics building, and that includes the janitor! A key person at this workshop was Jim Leitzel, who was a protector and friend when I ran into problems. The project director, John Hewitt, was also very fair. Because of the rules in 1963, I had a private room with my own bath in the dormitory.

After getting my Master's degree, I taught at Hampton Institute in Virginia, another black school, for 22 years. General Samuel Chapman Armstrong founded this school in 1870 for blacks and Indians. One who is unfamiliar with the significance of my dedication to teaching at an HBCU (historically black college or university) should read the history of the rise of schools for colored students and the Morrill Act associated with Land Grant Colleges.

I received my Ph.D. in mathematics education from the University of Maryland. My advisor was Henry Walbasser. My focus was on studying how people learn mathematics and the preparation of teachers of mathematics. During my days at UMCP I had the opportunity to work with many of the outstanding leaders in mathematics education. I became the first African American female to be a full time professor to teach mathematics at UMCP!

How about siblings? Did they influence your mathematical development? How?

There were three girls in the family: Gwen, Loretta, and Genevieve, born two years apart.

Gwendolyn Elizabeth was the oldest. She became Mathematics and Computer Science Professor at Florida A & M University. She completed her course work and dissertation at Ohio State University. Joe Crosswhite was her advisor. She was a member of MAA, AMS, the National Association of Mathematicians (NAM), and the Benjamin Banneker Association (BBA).

Gwen was very political, and she was active with the Democratic Party and was the first African American president of the Southeast Women Caucus.

The middle girl was Loretta Jean. She was a science teacher in junior and senior high school. Also, she was founder and Director of the Ballou Math/Science Program and project officer for the Annenberg Foundation. Loretta obtained an M.S. degree in biology with advanced study at Georgetown University, the National Institute of Health, and St. Elizabeth Hospital, with a focus on genetics and brain studies.

Each of us graduated with highest honors in the mathematical sciences. We were extra talented in all subjects, even P.E.!

How did you get involved in the MAA?

I first joined AMS and MAA because membership in a mathematics professional organization was a requirement to earning an "A" in seminar! I gave the Gibbs Lecture as a project! At this time I had NOT attended any meeting; recall I lived in the southeast in the sixties!

After graduation from Atlanta University, I continued to participate in AMS and MAA. I do not recall the year, but it was in Atlanta at a Joint Meeting that a committee of AMS informed us, the mathematics educators, that we were not to be considered as equal to the real mathematicians! I dropped AMS for good!

I am a lifetime member of NAM, the National Association of Mathematicians, which was formed in 1969 because the AMS and MAA weren't friendly toward, nor meeting the needs of, blacks. Key early folks in NAM were Johnny Houston, who's written a book on NAM, Lee Lorch, and Rogers Newman, the first president.

Did you receive mentoring at the early stages of your career? By whom?

My sister Gwen and Shabazz were important early on, as I've already mentioned. Other mentors were my teachers, in high school and college, and members in the MD/DC/VA Section. Later on, Lida Barrett, who supported minority participation in MAA committees, was an important mentor. John Kenelly at Clemson and Jim Leitzel were also very supportive.

Are there any efforts of yours in the MAA that you are disappointed with?

I am disappointed that my experience and service to the organization were not valued when I ran for an office. The MAA has never elected a minority as President and people give the lame excuses about contributions to the profession. In order to participate as professionals, a new organization was born in 1969 – NAM, the National Association of Mathematicians.

Little exclusions lead to resentment. For example, some of us attend Silver and Gold banquets yearly and yet we are seldom invited to take a leadership role.

The MAA membership hasn't embraced diversity. Some sections are not in step with the MAA and just give lip service to treating all equally. In my section, MD-DC-VA, I organized a sectional meeting at Coppin, though there was some resistance to trying a meeting at a black college. Sister Helen Christensen encouraged the effort. In fact, our meeting became a model for how to organize a sectional meeting. Today in our section meetings are routinely held at various types of institutions.

What changes have you seen in the MAA since you first became involved?

Since Lida Barrett's time, there's been a growth in minority membership on committees. But there's been no change relative to elected positions. It appears that there are slots for various positions.

Were you involved with NCTM or any other organizations that focus on education?

I have been actively involved in NCTM and numerous other organizations. You'll have to look at my resume. Here are some highlights. I served on the Board of the NCTM, 1983-1986, and on several committees including the 1989 Committee to Implement the NCTM Curriculum and Evaluation Standards. I am a life member of NAM, the National Association of Mathematicians. I helped create and name the Benjamin Banneker Association. I was a founding member of the Association of Mathematics Teachers Educators. I was very active in NCATE, the National Council for Accreditation of Teacher Education. Among many national boards and committees, I was a member of MSEB's Making Mathematics Work for Minorities Committee.

I see that you were a member of AWM. Were you involved beyond membership?

For years I was actively involved until there was a sharp turn in the leadership. It appears that people of my background and service are not welcomed!

Thanks, Genevieve, for this very interesting interview.

Web references: http://www.math.buffalo.edu/mad/PEEPS/knight_genevieve.html
<http://www.maa.org/summa/archive/knightg.htm>